Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

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ABSTRACT

This paper explored the innovativeness and adoption categorization in library automation of the Federal Colleges of Education libraries North-West Nigeria. The majority of higher institutions of learning in North-West Nigeria rely very well on the traditional method of library functions and services rather than adopting the order automation. And the yardstick for measuring the effectiveness of institution bodies is the extent to which they are exposed to new things. Therefore, the overall objective of the study was to provide an explanation on the driver problem of lack of adoption for library automation by the academic libraries. The population of the study involved five (5) sampled college librarians, each represented from the five Federal Colleges of Education North-West Nigeria. A descriptive survey method, alongside a questionnaire, was used for data collection. Before the survey, questionnaire items were validated by lecturers in the Department of Library and Information Science, University of Gezira Sudan. A run reliability test (alpha level 0.05) indicated 0.700 Cronbach's Alpha Coefficient on innovativeness for the adoption of library automation, and 0.993 Cronbach's Alpha Coefficient on adoption category for library automation. Data collected were analyzed using descriptive statistics of simple frequency count and mean scores. All the college librarian questionnaires were retrieved and used for data analysis.

Kyewords: College Library, Library Automation, Northern Nigeria.

Classification: FOR Code: 339999

Language: English

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ABSTRACT: ENGLISH

This paper explored the innovativeness and adoption categorization in library automation of the Federal Colleges of Education libraries North-West Nigeria. The majority of higher institutions of learning in North-West Nigeria rely very well on the traditional method of library functions and services rather than adopting the order automation. And the yardstick for measuring the effectiveness of institution bodies is the extent to which they are exposed to new things. Therefore, the overall objective of the study was to provide an explanation on the driver problem of lack of adoption for library automation by the academic libraries. The population of the study involved five (5) sampled college librarians, each represented from the five Federal Colleges of Education North-West Nigeria. A descriptive survey method, alongside a questionnaire, was used for data collection. Before the survey, questionnaire items were validated by lecturers in the Department of Library and Information Science, University of Gezira Sudan. A run reliability test (alpha level 0.05) indicated 0.700 Cronbach's Alpha Coefficient on innovativeness for the adoption of library automation, and 0.993 Cronbach's Alpha Coefficient on adoption category for library automation. Data collected were analyzed using descriptive statistics of simple frequency count and mean scores. All the college librarian questionnaires were retrieved and used for data analysis. And findings revealed that, the innovativeness for the adoption of library automation by the academic libraries was characterized by the following: speediness, automatic and ease to use, economic advantage, storage capacity, and social prestige, among others. Another finding revealed on the construct of a theory, the adoption category of the academic libraries: alike, Federal Colleges of Education Bichi, Katsina and Zaria were found 'Early Adopters'. The researcher concluded on the whole, the adoption of library automation by the academic libraries studied is positive only that, affordability of library automation wasn't flexible for the libraries. Hence, one vital recommendation was the need for the Federal Colleges of Education libraries North-West Nigeria to be adequately funded by the colleges, so that finance becomes not a problem to them in adopting forthcoming library automation.

Keywords: College Library, Library Automation, Northern Nigeria.

الملخص: العربية

هذه الورقة في الابتكار تبين تصنيف أتمتة المكتبة في مكتبات كليات التربية الاتحادية شمال غرب نيجيريا. تعتمد غالبية مؤسسات التعليم العليا في شمال غرب نيجيريا بشكل جيد للغاية على الطريقة التقليدية لوظائف المكتبة وخدماتها بدلاً من اعتماد الأتمتة. والمعيار لقياس فعالية هيئات المؤسسات هو مدى تعريضهم لأشياء جديدة. لذلك، كان الهدف العام من الدراسة هو توضيح مشكلة عدم اعتماد أتمتة المكتبات من قبل المكتبات الأكاديمية التي تم ذكر أسماء مؤسستها في وقت سابق. شارك سكان الدراسة في خمسة (5) من أمناء المكتبات في الكلية، وتم أخذ عينات منهم ، وتم تمثيل كل منهم من كليات التعليم الفيدرالية الخمس في شمال غرب نيجيريا. تم استخدام طريقة المسح الوصفي جنبًا إلى جنب مع استبيان لجمع البيانات. قبل المسح، تم التحقق من صحة بنود الاستبيان من قبل المحاضرين في قسم علوم المكتبات والمعلومات ، جامعة الجزيرة السودان. وأشار اختبار موثوقية التشغيل (مستوى ألفا 0.05) إلى معامل ألفا كرونباخ 0.700 على الابتكار في تبني أتمتة المكتبة، و 0.993 معامل ألفا كرونباخ في فئة التبني لأتمتة المكتبة. وقد تم تحليل البيانات التي تم جمعها باستخدام إحصاءات وصفية لعدد التردد بسيط وعشرات المتوسط. تم استرداد جميع استبيانات أمين مكتبة الكلية

واستخدمت لتحليل البيانات. وكشفت النتائج أن الابتكار في تبني المكتبات الأكاديمية للتشغيل الآلي للمكتبات تميزت بما يلي: السرعة ، والتلقائية وسهولة الاستخدام ، والميزة الاقتصادية ، والسعة التخزينية ، والسمعة الاجتماعية وغيرها. وكشف اكتشاف آخر بناء نظرية عن فئة تبني المكتبات الأكاديمية: على حد سواء، تم العثور على كليات التعليم الفيدرالية Bichi و Katsina و Zaria "المتبنون الأوائل". وخلص الباحث في الملاحظة إلى أن اعتماد أتمتة المكتبات من قبل المكتبات الأكاديمية التي تمت دراستها أمر إيجابي ، إلا أن القدرة على تحمل تكلفة التشغيل الآلي للمكتبات لم تكن مرنة بالنسبة للمكتبات. ومن هنا ، كانت إحدى التوصيات الحيوية هي الحاجة إلى تمويل مكتبات كليات التربية الفيدرالية في شمال غرب نيجيريا بتمويل كافٍ من قبل مؤسساتهم الأم ، بحيث يصبح التمويل ليس مشكلة لهم في تبني أتمتة المكتبات القادمة.

الكلمات المفتاحية: مكتبة الكلية ، أتمتة المكتبة ، شمال نيجيريا

I. INTRODUCTION

In everyday life, new innovations come our way. Obviously, a shift to the new ways of doing things has remarkably changed or affected our activities in a more defined dimension than the previous. Information and Communication Technologies (ICTs) have come in a time when professionals in various fields of disciplines like engineering, medicine, aviation, and so on are looking for mediums of improving their processes of services. Librarians are not in any way an exception to the quest for new discoveries to effectively discharge their activities, they require ICTs most – especially on this day of the world where the entire community focuses and relies so greatly on ICT. So, the role of libraries as safe gatekeepers of information will be facilitated by integrating new innovations to the library system. Nonetheless, libraries existed for a long time in history, but today, we can categorically classify them as either traditional or modern libraries comprising various functions and services of information related. The nature of library routines and or services in a traditionally oriented library differs from that of a modern library. The line of demarcation or differentiation of the two libraries, 'traditional' and 'modern library', lies in the adoption of library automation. While the former is not characterized by a paradigm shift in the automation of its functions and services, the latter does. However, the importance for libraries adopting library automation in the 21st century cannot be over emphasized.

Library automation is the new trend for libraries, highly essential, and has a wide range of activities. The automation is economically feasible and technologically required in modern libraries to cope up with the enormous increase in the collection of materials, storage, problems of acquisition, processing, dissemination, and transmission of information (Bhardwaj & Shukla, 2000). This is why (Madu, 2004) is of the view that one of the reasons for library automation is the efficiency which results in the use of an automated system, and elaborately (Eme, Sampson, & Esiere, 2012) identify the advantages of library automation each as a subject to include, multiple access, information retrieval, preservation and conversation, space, added value, and round the clock availability, etc. These advantages in automation cannot be over emphasized. (Lubanski, 2012), defines automation as the use of machines or technologies to optimize productivity in the production of goods and delivery of services. Therefore, library automation is simply the mechanization of library activities. (Ukachi, Nwachukwu, & Onuoha, 2014), refer to library automation as the process of applying or utilizing ICTs to perform those tasks that are traditionally performed manually in libraries such as acquisition, cataloguing, circulation, serials management, etc.

No doubt, the application of automation in libraries is an innovation of somewhat late 20th and eventually the 21st century. (Rogers, 1962), established five adopter categories, namely, innovators, early adopters, early majority, late majority, and laggards, which are significant in measuring a social system, level of adoption in a given period of time. Libraries state of adoption of an innovation can be greatly analysed using the Rogers' theory of Diffusion of Innovation.

II. STATEMENT OF THE PROBLEM

With all the relevance of library automation as a good innovation for libraries, especially academic

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Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

libraries, it was observed by the researcher on a visit to some higher institutions in North-West Nigeria that, majority of the libraries rely very well on the traditional method of library functions and services rather than adopting automation. And in the 21st century, the yardstick for measuring the effectiveness of individuals, institutions, organizations, or corporate bodies is the extent to which they are exposing to new things (Toyyo & Abareh, 2012). There is the fear libraries that lack automation may lose their customers. In fact, (Igben & Akobo, 2007), observed that there is evidence to prove that libraries are fast losing their users, only a few people visit the libraries for the traditional services, as what they used the library for can now directly be assessed using personal computers to connect to databases and sites online. However, this paper will explore the innovativeness and adoption categorization of the academic libraries, Federal Colleges of Education (FCE) North-West Nigeria.

III. OBJECTIVES OF THE STUDY

General Objective:

The overall objective of the study is to provide an explanation on the problem of lack of adoption for library automation by the academic libraries of Federal Colleges of Education North-West Nigeria, in view for modern libraries.

3.1 Specific objectives

1. To investigate the innovativeness in the adoption of library automation by the academic libraries of Federal Colleges of Education North-West Nigeria in application of (Rogers, 1962) Diffusion of Innovation Theory.
2. To investigate the adoption category of the academic libraries of Federal Colleges of Education North-West Nigeria in the application of (Rogers, 1962) Diffusion of Innovation Theory in their adoption of library automation.

3.2 Theoretical framework

(Rogers, 1962) Diffusion of Innovation Theory was used as the theoretical framework in this study. Rogers lived from 1931 to 2004 and was the founding philosopher of the Diffusion of Innovation Theory. Before his death, Rogers was a holder of a PhD in sociology and statistics from Lowa State University 1957. His scholarly works centred most on developing the diffusion model and its application to different areas of study. The theory is built on four constructs: (1) an *innovation* (2) is communicated through certain *channels* (3) *over time* (4) among the members of a *social system*. Obviously, the adoption of an innovation or new way of doing things does not all happen simultaneously the same time in a given social system. Therefore, 'the time' as one of the major constructs of the theory was used with great attention in this study. In the Diffusion of Innovation Theory, adoption tends to be in a time sequence, which is classified in to adopter categories based upon time it takes to begin using a new idea. In essence, it is useful to identify which category each of the Federal Colleges of Education libraries belongs to, since it was established (in chapter one) that most academic libraries in Nigeria lacked proper adoption and utilization of library automation. This further means that library automation may be a new innovation to the libraries. However, (Rogers, 2004) pointed out the significance of time in three phases of diffusion study and these three building blocks are:

Adopters pass through an innovation decision process in adopting an innovation, and the process constitutes five steps. Innovation as conceived by Rogers is an idea perceived as new by the individual in knowledge, persuasion, decision to adopt, implementation, and confirmation.

Knowledge: This refers to the situation in which an adopter becomes aware of the innovation and has some idea of how it functions. The philosophy holds that one cannot adopt a process without first-of-all knowing about the innovation, and this

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

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Volume 20 | Issue 2 | Compilation 1.0

43

is absolutely true. An adopter first develops awareness of the technology, and this defines the knowledge stage. Experience counts a lot in our knowledge know-how. Therefore, a library may come about the knowledge of library automation via library consortium programs, advertisement by vendors, and or see other libraries adopt.

Persuasion: The theory holds the formulation of an attitude towards the innovation, making a favourable or unfavourable deduction. For a library to be aware of library automation requires developing interest in the technology, and interest will be developed by seeking out information about the technology, such as cost and features of the technology, etc. At this point, the adopter is perceived as a potential user of the technology and begins to actively consider whether or not to adopt the technology in to practice.

Decision (making): It involves the activities that lead to a choice of acceptance or rejection of the innovation. At most times, it is the critical assessment of the innovation that provides the adopter with a sense to look in to the advantages and disadvantages of the innovation to be adopted. If favourable is accepted and if the opposite, it is rejected. Therefore, a library may decide to accept library automation because the cost involved is purchasable, while another library may see the technology too exorbitant. Other libraries could decide based on feature attributes of the library automation, such as storage and retrieval system capabilities, etc.

Implementation: It is the action stage or actual use of the innovation, thereby putting the innovation in to use or practice, which can be slow and time consuming. Hardly adopters completely invest in innovation (putting all eggs in a bag) at the first time, while others may do, but the percentage is negligible. At this time, the adopters adapt or modify the technology to better meet individual or organizational goals and improve compatibility. The modification may involve using the technology for a different task different from the technology's original purpose. A library that adapts library automation could first apply the concept to the cataloguing module and wait to assess results.

Confirmation: Simply, it is the commitment to adopt the innovation, evaluating the result of the decision of the innovation made earlier, and it is the final step adopters pass in adopting an innovation. At this point, adopters finalize in decision regarding the adoption of the technology. One option is exactly the adoption – How? A library that found the automation process resulting in an adapted library routine (for example, the cataloguing module) finally adopts the library automation, that is, extending the automation process to other library functions and services like acquisition, and serial functions, indexing, and abstracting services, etc.

From the aforesaid, it is important to note that, adopting an innovation can be discontinued as put forward by the Diffusion of Innovation Theory. It is usual that sometimes an adopter does not always continue to use an innovation, especially the technology of today. Most often, after a specific period of time, some technologies face obsolescence (out-of-date), the technology may stop working, or a better version is invented. So, the adopter tends to replace the old system for a current one, and this is called 'replacement discontinuance'. Another form of discontinuance is 'abandonment' and occurs when the adopter becomes dissatisfied with the technology in time. In Nigeria, for instance, studies have shown a majority of the academic libraries have witnessed such a series of either replacing, or abandoning the use of library automation software, databases or networks in one time or the other. (Imo & Igbo, 2011), reported that full scale planning on automation started well at the Kenneth Dike Library of University of Ibadan and later stopped, until the IITA (International Institute of Tropical Agriculture) intervention, the library later embarked on a new trend of automation. Similarly, (Otunla, 2016), observed some of the early adopter libraries in Nigeria have been migrating from one library software to another due to failures recorded.

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

44 Volume 20 | Issue 2 | Compilation 1.0 © 2020 London Journals Press

Innovativeness of the adopter, that is, the timeliness with which an innovation is adopted compared with other members in the system. It provides an answer to the question of 'how fast' in time is the adoption of an innovation by the adopter. In other words, what influences the innovation of the adopter? The theory identified five qualities that makes an innovation successful in time, and they are:

Relative advantage: It explains the degree to which the innovation is perceived as better than the idea it supersedes. There is no fast rule as to what constitutes a relative advantage; it all depends on the perception of the adopter. A library may adopt library automation because of relative economic advantage, social prestige, convenience, or satisfaction, etc. The theory suggests that the greater the perceived relative advantage of the innovation, the more rapid its rate of adoption is likely to be.

Compatibility: It is the degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of the potential adopter. The notion is that, innovations that aren't compatible with adopters' principles, needs, or practices will definitely not be accepted rapidly as that innovation which is compatible. In the library automation process, like the OPAC, is a clear representation of the traditional public catalogue which can be accepted in time, basically because it is consistent with existing values of bibliographic records in a library.

Complexity: It explains the degree to which the innovation to be adopted is perceived as difficult to understand and use. Innovations that prove simplicity and ease of use, chance the way to be rapidly adopted in time, than innovations which requires the adopter to develop new skills and understanding. Therefore, library automation, which demonstrated uncomplicatedness in the usage of software, database, computerization, and networking, may chance to be quickly adopted by a library in time.

Trial: It is the degree to which the innovation undergoes the process of experiment on a limited basis. Therefore, library automation put on trial first, clears the issues of uncertainty in the library considering the technology. This in turn speeds the moral of the library in accepting the automation process.

Observation: It is the degree to which the results of the innovation are visible. The easier it is for libraries to see the results (such as diligence) of library automation, the more likely they are to adopt it. The idea is that, visible results lower uncertainty and stimulate peer discussion of a new idea. Libraries of the same academic nature will often seek information from one another about a particular technology.

According to the theory, the above five distinctive qualities of adopters innovativeness is determined between 49% and 87% of the variation in the adoption of new products, but successful innovations are those perceived as been more advantageous than current ideas, compatible, easily tried, highly observable, and not difficult to use.

The adopter categorization is measured on the basis of the adopter's innovativeness. It is the adoption rate of an innovation often measured as the number of members of a system who adopted an innovation in a given time period. The theory characterized five adopter categories as follows:

Innovators: Rogers observed 2.5% of adopters fall as innovators. Innovators are seen as venturesome almost a mania for them, always eager to give new ideas a trial. Their interest in new innovations put them in a position out of peers and a kind of composite social relationships than usual. Hence, there are libraries that do not lack substantial financial resources to invest into library automation, in fact, this isn't a problem. The innovator is always willing to accept the occasional setback when new ideas prove unsuccessful.

Early adopters: Rogers observed 13.5% of adopters fall as early adopters. Like the two sides of a coin, early adopters seem to be included in a local social system and, on another hand,

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

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Volume 20 | Issue 2 | Compilation 1.0

45

London Journal of Research in Humanities and Social Sciences

resemble innovators but not innovators per-say. More than any other category, these adopters have the greatest degree of opinion leadership. Before adopting any innovation, they first seek advice and information sought by other adopters about an innovation, specifically from the innovators. Therefore, some libraries will first gather knowledge to decrease their uncertainty about library automation to be adopted. Rogers opined that, early adopters are usually respected by their peers and have a reputation for successful and discrete use of new ideas.

Early majority: Rogers observed 34% of adopters fall as an early majority. The innovation decision time of these adopter categories is believed to be relatively longer than the innovators and early adopters. Therefore, there are libraries that hardly ever hold leadership, and so, their adoption to library automation depends on satisfaction after numerous interactions with peers. According to Rogers, hardly ever do early majorities willingly follow in adopting innovations, and to some people, this makes them an important link in the diffusion process.

Late majority: Rogers observed another 34% of adopters fall as a late majority. These kinds of adopters are usually sceptical, always unconvinced about adopting new innovations. Therefore, there are libraries that will always delay too long before adopting library automation in time, so cautious to an extent until almost every library accepts. Despite the disadvantage in early growth and development, reasons for their adoption in time may be due to economic resources. According to Rogers, while the late majority may be persuaded about the utility of an innovation, there must be strong pressure from peers to adopt.

Laggards: Rogers observed 16% of adopters fall as laggards. Laggards' point of referral is the previous, always making contact with others of relatively same traditional values. The traditional system of doing things is suspiciously minded, which results in a slow innovation-decision process that set them far behind the knowledge of new practices. Therefore, there are libraries that tradition has played a significant role in their acceptance of library automation. Strength in economic resources of these adopter categories may have been the reason for their conservativeness to be exceptionally cautious in adopting innovation. According to Rogers, laggards are likely to be suspicious not only of innovations but of innovators and change agents as well (very wise indeed). And he added that, this classification or nomenclature of the laggards posits a bad image in the innovation scenario, though diffusion scholars do not mean any disrespect to the laggards.

The categorizations by Rogers showed the normal frequency distributions divided into five adopter categories presented in the figure 1.1 below.
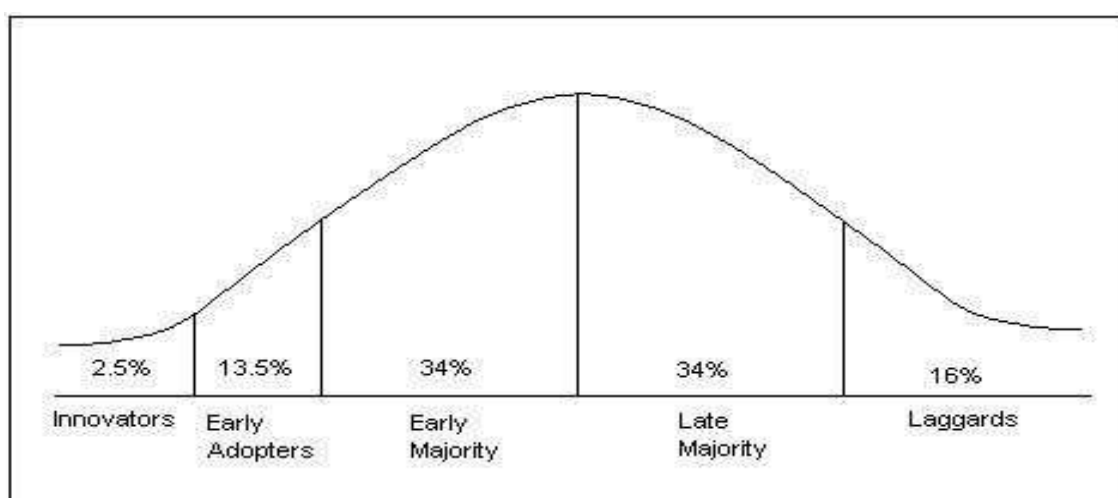

Figure 1.1   Rogers adopter categorization

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

IV.   LITERATURE REVIEW

Previous studies have been conducted to describe and or provide an explanation for the adoption of library automation by various libraries in Nigeria. Some of these literatures are discussed next. (Adegbore, 2010), studied about the automation of two Nigerian university libraries, that is, the Nimbe Adedipe Library University of Agriculture, Abeokuta (NALUAA), and the University Library of Olabisi Onabanjo University (ULOOU). Interview checklist was administered to university librarians, and their responses indicated the adoption of library automation. The study found that the two libraries did not adopt library automation at the same period, however, the libraries were found using TINLIB (The Information Navigator Library Management), GLAS (Graphical Library Automation System), and ALICE (Artificial Linguistic Computer Entity) integrated library software. (Imo & Igbo, 2011), surveyed the experiences from 1990-2009 of challenges in software use in South-West Nigerian university libraries. 75% of the university libraries indicated mostly migration from the use of one software to another. They first used TINLIB and later adopted GLAS, Alice for Window, VIRTUA (Visionary Technology in Library Solutions), SLAM (Simultaneous localization and mapping), and CDS-ISIS (Computerized Documentation System/Integrated Sets of Information System) among others. In fact, the universities were found changing software averagely within five years of use. And reasons for their migrations ranged in series of complaints like the high cost of maintenance, among others. (LRCN & NITDA, 2015), held a four day workshop for Nigerian libraries on FOSS (Free and Open Source Software). 37 Librarians across the country were taken through interactive and intensive practical sessions on the following application of FOSS: database creation using CDS/ISIS (Computerized Documentation System/Integrated Sets of Information System), application of New GenLib (integrated library management software-ILMS), Koha (ILMS), and demonstration of Greenstone (digital library). The essence was for Nigerian libraries to incorporate ICTs in order to continually serve as the equitable access to information in the country. (Enefu, 2015), investigated the adoption of cloud computing technology for library services in the National Open University of Nigeria Library (NOUN), and qualitative methodologies were used. Findings of the study indicated the implementation of cloud computing at NOUN in various aspects of library work. And the rationale for the adoption of cloud computing by the library shows the usefulness of cloud computing ranging from economic advantages and social prestige. Last but not least, (Hamisu, 2016), studied ICTs adoption and use among library staff of a college library in Northern Nigeria. In the study, about 80% of the library staff indicated to an extent acceptance of ICTs; being accurate and timely, easy in access and retrieval of information, good for research and development, and organization of work.

V.   METHODOLOGY

The five college libraries in Federal Colleges of Education North-West Nigeria were subjected for assessment to uncover their formal adoption of library automation. Descriptive survey method was used for the study. Survey has long enjoyed application in educational fields because of its flexibility and convenience, and for the purpose of generalization of findings. The population of the study involves the college librarians of Federal Colleges of Education libraries North-West Nigeria, and one is found from each of the academic libraries. Using (Yamane, 1967) sample size formula at 0.05 Margin of Error and 95% confidence, all the five (5) college librarians were re-represented as a sample for the study; hence no sampling technique was used. A questionnaire was administered to the college librarians by the researcher, but prior to that, the questionnaire instrument underwent thorough vetting in terms of relevance, clarity, and merit by lecturers in the Department of Library and Information Science, University of Gezira Sudan. And a pilot study

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

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conducted at Isa Kaita College of Education (COE) Dutsin-Ma Katsina and Shehu Shagari COE Sokoto libraries indicated a reliability result (alpha level 0.05) of Cronbach's Alpha Coefficient 0.700 on innovativeness for the adoption of library automation, and 0.993 on adoption category for library automation. Data collected for this study was analysed using descriptive statistics of simple frequency count, and mean scores.

A total of 5 (100%) college librarian questionnaires were retrieved and used for data analysis. The findings answered questions on the innovativeness and adoption category of the academic libraries of Federal Colleges of Education North-West Nigeria, using (Rogers, 1962) Diffusion of Innovation theory in their adoption of library automation. Tables 1.1 and 1.2 below provided the answers on 'innovativeness for adoption', and 'adoption category' of the academic libraries, respectively.

Table 1.1: Innovativeness for the adoption of library automation by the academic libraries of Federal Colleges of Education North-West Nigeria

S/N	Innovativeness for adoption	Response categories					Mean	Remarks
		SA	A	UD	D	SD		
1	Economic advantage	2	3	0	0	0	4.400	Agreed
2	Social prestige	1	3	1	0	0	4.000	Agreed
3	Compatibility with conventional library routines	2	2	0	1	0	3.600	Agreed
4	Automatic and easy to use	3	1	0	1	0	4.200	Agreed
5	Error free	2	3	0	0	0	4.400	Agreed
6	Diligence	2	3	0	0	0	4.400	Agreed
7	Speed	4	1	0	0	0	4.800	Agreed
8	Storage capacity	3	1	0	0	1	4.000	Agreed
9	Affordable	0	3	0	0	2	2.800	Disagreed
	Cumulative mean						4.067	

Standard/decision mean = 3.000

Table 1.1 indicated innovativeness, or what can be described as drivers for the adoption of library automation by the academic libraries of Federal Colleges of Education North-West Nigeria. The college librarians were in agreement with almost all the drivers in the above table for their adoption of library automation, because the overall mean response of 4.067 stood greater than the decision mean of 3.000. Specifically, adopting library automation was most innovative for the libraries in terms of its speediness, as this scored a mean of 4.800. For other reasons being economic advantage, error free and diligence had 4.400 each. Similarly, social prestige and storage capacity of automation scored 4.000 each. Also, in that magnitude of order included 'automatic and ease of use (4.200), and 'compatibility with conventional library routines (3.600). However, the academic libraries were in disagreement about

affordability with library automation as a driver for their adoption of automation, as this scored the least mean of 2.800. This means that library automation appears costly for the libraries. However, the importance of library automation cannot be over emphasized. Similar to the analysed nine (9) constructs provided by (Rogers, 1962) on innovativeness, (Tabusum, Saleem, & Batcha, 2013) have also urge libraries on ten (10) importance of automating the library to include: (i) information processing is done much faster which ensures better work flow through the library, (ii) the degree of precision and accuracy in processing information is high, (iii) operating costs can be reduced if the system is well designed and well managed, (iv) library workloads are better reduced as the computer can do vast amount of work and processing, (v) improves services to users, (vi) avoids and eliminates

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

48 Volume 20 | Issue 2 | Compilation 1.0

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duplication of work, (vii) easier access to external databases (viii) providing on-line access and search of information possible, (ix) eliminates human errors while performing routine library work, and last but not the least, (x) excellent control over circulation.

Table 1.2: Adoption categories of the academic libraries of Federal Colleges of Education North-West Nigeria

S/No	How did your library embrace library automation? Tick as appropriate					
	Adoption Categorizations	Response categories				
		FCE Bichi	FCE Gusau	FCE Kano	FCE Katsina	FCE Zaria
1	My library took whole risk to adopt library automation without any consultation	-	✔	✔	-	-
2	My library sought advice and information from libraries who earlier adopted library automation	✔	-	-	✔	✔
3	My library adopted library automation on satisfaction gained after numerous interactions with adopted libraries	-	-	-	-	-
4	My library adopted library automation after a long watch out and convinced that almost all academic libraries within have adopted	-	-	-	-	-
5	My library seems suspicious and so, always in contact with libraries of same traditional values before finally adopting library automation	-	-	-	-	-

Table 1.2 showed the adoption category of the academic libraries of Federal Colleges of Education North-West Nigeria based on the construct of (Rogers, 1962) Diffusion of Innovation Theory. Federal Colleges of Education Gusau and Kano libraries specified took the whole risk to adopt library automation without any consultation, which explains their adoption category as 'Innovators'. While Federal Colleges of Education Bichi, Katsina and Zaria affirmed seeking advice and information from libraries who earlier adopted library automation before finally adopting, which makes the libraries fall second as 'Early Adopters'. A re-representation of innovation diffusion categories by (Roger & Kincaid, 1981) identified 'Innovators' as 'Risk Takers' (2.5%), and 'Early Adopters' as 'Opinion Leaders' (13.5%).

VIII. CONCLUSION

The study explored the innovativeness and adoption categorization of academic libraries, Federal Colleges of Education North-West Nigeria. The problem being that most libraries in North-Western Nigeria lacked adoption of library automation as a new way of library activities. As a result, the college librarians in each of the five Federal Colleges of Education libraries were sampled to provide answers, pertaining to their innovativeness and adoption category for library automation. Findings of the study revealed that the innovativeness for adoption of library automation by the academic libraries of Federal Colleges of Education North-West Nigeria is characterized of the followings: speediness, economic advantage, error free, diligence, social prestige, storage capacity, automatic and ease to use, and compatibility with conventional library routines. A second finding based on the construct of (Rogers, 1962) adoption categorization (Diffusion of Innovation Theory), revealed that, Federal Colleges of Education Gusau and Kano libraries are of adoption category 'Innovators', as against Federal Colleges of Education Bichi, Katsina and Zaria characterized as 'Early

Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

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Volume 20 | Issue 2 | Compilation 1.0

49

Adopters'. Hence, the researcher concluded on the note that, the adoption of library automation by the Federal Colleges of Education libraries is positive, only that, affordability of library automation wasn't flexible for the libraries.

XI. RECOMMENDATIONS

Based on findings in this study, one vital recommendation was observable:

There is the need for the Federal Colleges of Education libraries North-West Nigeria to be adequately funded by their parent institutions, so that finance becomes not a problem in adopting forthcoming library automation.

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Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

50 | Volume 20 | Issue 2 | Compilation 1.0   © 2020 London Journals Press

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Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

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Volume 20 | Issue 2 | Compilation 1.0

51

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Exploring the Innovativeness and Adoption Categorization in Library Automation of the Federal Colleges of Education Libraries North-West Nigeria

52   Volume 20 | Issue 2 | Compilation 1.0   © 2020 London Journals Press